WHAT IS CLAIMED IS:

1. A dried hemoactive material comprising:

a cross-linked biologically compatible polymer which forms a hydrogel when exposed to blood; and

a non-cross-linked biologically compatible polymer which solubilizes when exposed to blood:

wherein the cross-linked polymer is dispersed in a dried matrix of the non-cross-linked polymer.

2. A dried hemoactive material comprising:

a non-cross-linked polymer comprising a dry gelatin matrix; and

dry, cross-linked gelatin polymer particles dispersed in the dry non-cross-linked gelatin matris.

3. A material as in claim 1 or 2, wherein the cross-linked polymer has a degradation time of at least one day.

4. A material as in claim 1 or 2, wherein the non-cross-linked polymer solubilizes in 15 minutes or less when exposed to blood.

5. A material as in claim 1 or 2, wherein the cross-linked polymer is fragmented so that, upon hydration in blood, the polymer will form a gel with a sub-unit size in the range from 0.01 mm to 5 mm.

6. A material as in claim 5, wherein the cross-linked polymer has an equilibrium swell in the range from 400% to 5,000%.

7. A material as in claim 1 or 2, wherein the cross-linked polymer is present at from 50 weight % to 95 weight % of the material and the non-cross-linked material is present at from 50 weight % to 1 weight % of the material.

8. A material as in claim 7, further comprising a plasticizer present at from 1 weight % to 20 weight % of the material.

9. A material as in claim 8, wherein the plasticizer is present in at least the non-cross-linked polymer.

10. A material as in claim 9, wherein the plasticizer is selected from the group consisting of polyethylene glycol, sorbitol, and glycerol.

11. A material as in claim 1, wherein the cross-linked polymer is a protein selected from the group comprising gelatin, collagen, albumin, hemoglobin, fibrinogen, fibrin, fibronectin, elastin, keratin, laminin, and casein.

12. A material as in claim 1, wherein the cross-linked polymer is a carbohydrate or carbohydrate derivative selected from the group consisting of glycosaminglycans, starches, celluloses, hemicelluloses, xylan, agarose, alginate, and chitosan.

13. A method as in claim 1, wherein the cross-linked polymer is a non-biologic hydrogel-forming polymer or copolymer selected from the group consisting of polyacrylates, polymethacrylates, polyacrylamides, polyvinyl polymers, polylactides-glycolides, polycaprolactones, polyoxyethelenes, and copolymers thereof.

14. A material as in claim 1, wherein the non-cross-linked biologically compatible polymer is a protein selected from the group consisting of gelatin, collagen, albumin, elastin, and keratin.

15. A material as in claim 1, wherein the non-cross-linked biologically compatible polymer is a carbohydrate or carbohydrate derivative selected from the group consisting of glycosaminoglycans, alginate, starch, cellulose, and derivatives thereof.

16. A material as in claim 1 or 2, further comprising an active agent.

17. A material as in claim 16, wherein the active agent is present in at least the non-cross-linked polymer.

18. A material as in claim 16, wherein the active agent is present in at least the cross-linked polymer.

19. A material as in claim 16, wherein the active agent is present in both the non-cross-linked polymer and the cross-linked polymer.

20. A material as in claim 16, wherein the active agent is selected from the group consisting of antibiotics, anti-neoplastic agents, bacteriostatic agents, bactericidal agents, antiviral agents, anesthetics, anti-inflammatory agents, hormones, anti-angiogenic agents, antibodies, enzymes, enzyme inhibitors, and neurotransmitters.

21. A material as in claim 16, wherein the active agent is a hemostatic substance.

22. A material as in claim 21, wherein the hemostatic substance is a clotting factor.

23. A material as in claim 22, wherein the clotting factor is thrombin.

24. A material as in claim 1 or 2, in the form of a sheet having a thickness in the range from 1 mm to 25 mm.

25 . A material as in claim 24, wherein the sheet is packed in a sterile pack.

26. A kit comprising:

a sterile pack;

a sterile sheet of material as in claim 24, packaged in the sterile pack; and

instructions for use setting forth a method for inhibiting bleeding by placing the sterilized sheet of material over bleeding tissue.

27. A method for inhibiting bleeding, said method comprising:

applying the material of claim 21 to a wound site.

28. A method for delivering an active agent to a patient, said method comprising:

exposing the material of claim 16 to patient blood.

29. A method for making a hemoactive material, said method comprising:

dissolving a non-cross-linked biologically compatible polymer which solubilizes when exposed to blood in an aqueous medium;

suspending particles of a cross-linked biologically compatible polymer which forms a hydrogel when exposed to blood in the aqueous medium; and

drying the aqueous medium to form a solid phase comprising the dried polymeric particles in a dry matrix of the non-cross-linked polymer.